Sept. 25, 1951 G. L. CURLE **2,569,230**

GALLEY FOR HANDLING MATRICES

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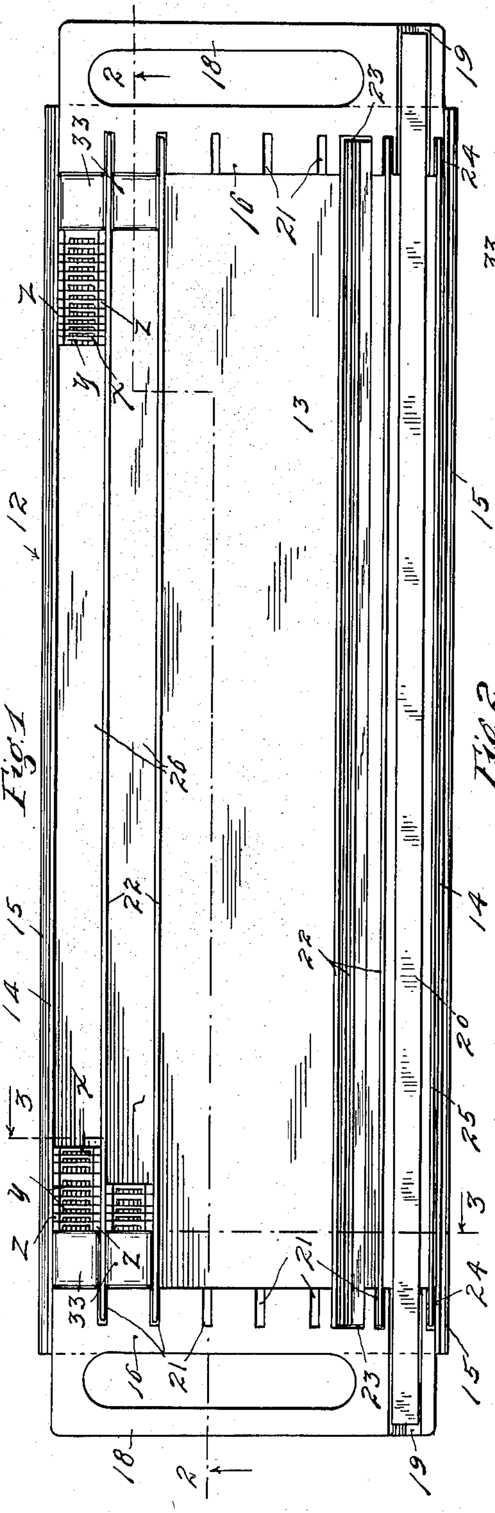
Fig. 1

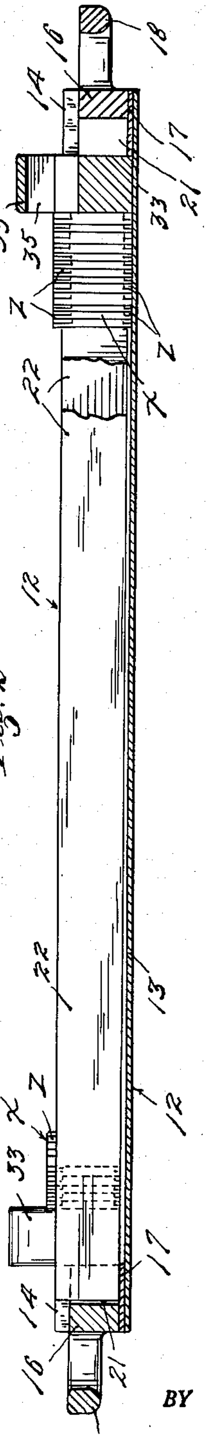
Fig. 2

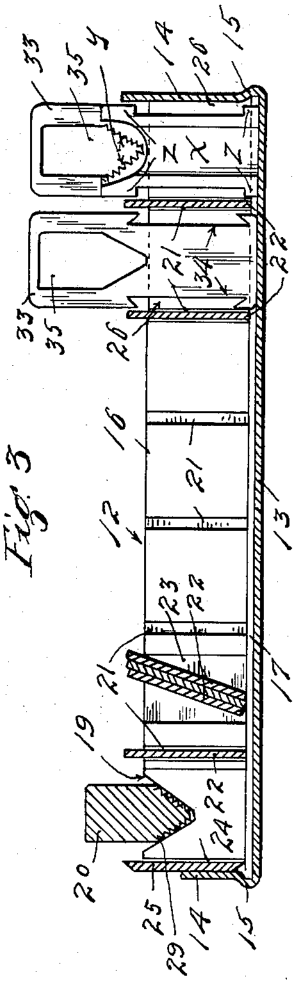
Fig. 3

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Fig. 10

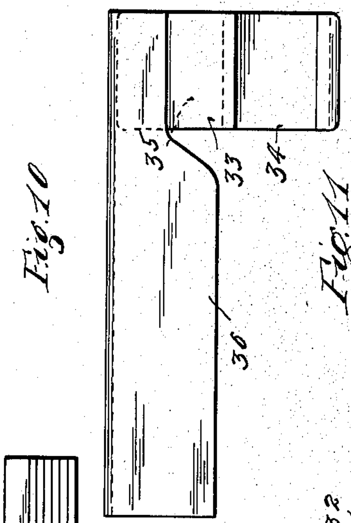


Fig. 9

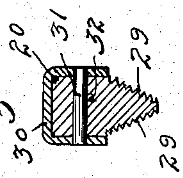


Fig. 11

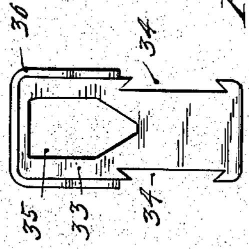


Fig. 8

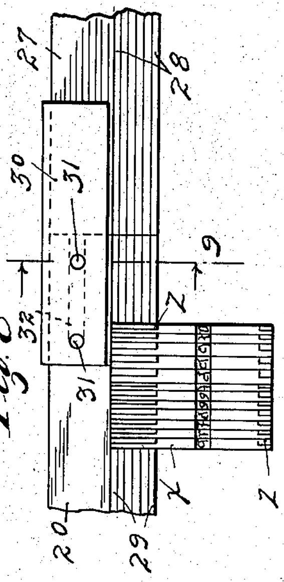


Fig. 4

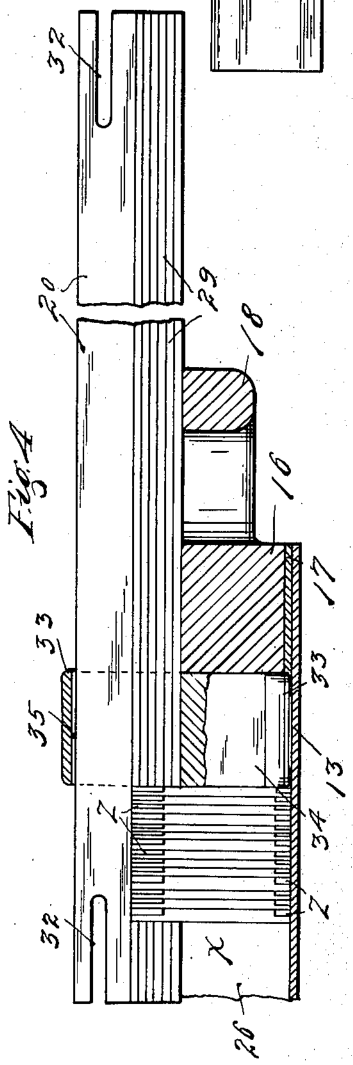


Fig. 5

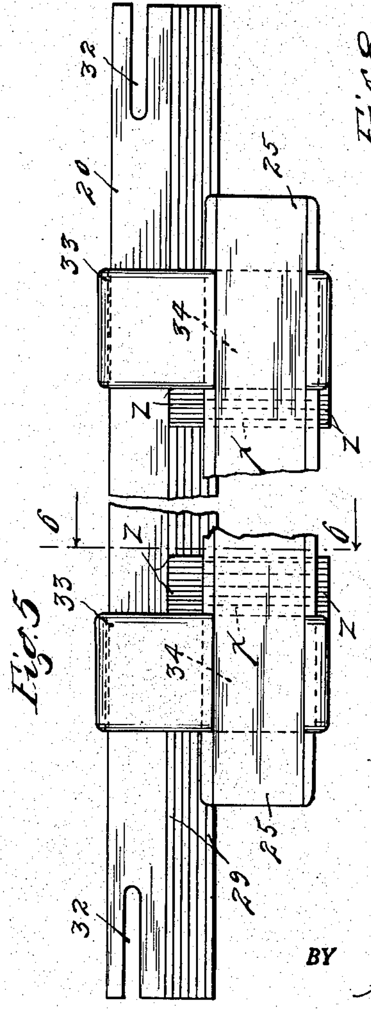


Fig. 7

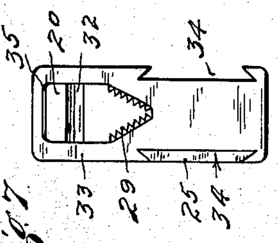
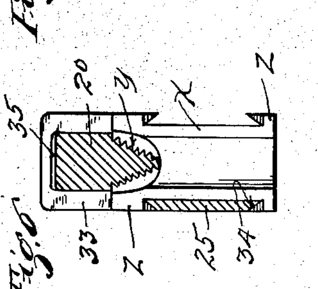


Fig. 6



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Patented Sept. 25, 1951 **2,569,230**

UNITED STATES PATENT OFFICE

2,569,230

GALLEY FOR HANDLING MATRICES

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Application December 9, 1946, Serial No. 715,061

10 Claims. (Cl. 276—38)

My present invention relates to improvements in galleys and a novel method of handling and cleaning matrices for Linotype machines and for returning the cleaned matrices to the machine.

It is well known that matrices for Linotype machines must be periodically cleaned to remove oil, graphite and other foreign matter thereon to prevent their sticking in the magazine of the machine and therewise interfering with their free movements in the machine and the casting of the type.

One of the objects of this invention is to provide a novel galley for holding matrices upright in rows.

Another object of this invention is to provide a service bar for picking up a given row of matrices in the galley by their distributor combinations teeth.

A further object of this invention is to provide a pair of heads applicable to the service bar, with the matrices therebetween, for holding the matrices pressed together and using said heads as handles for manipulating the service bar to subject the matrices thereon to the cleaning and buffing action of a motor-driven buffing wheel.

A still further object of the invention is to provide novel means for holding the matrices on the service bar, while being cleaned, against relative movements in the planes thereof, for protecting their casting faces and for relieving the strain on their combinations teeth interlocked with the service bar.

Another object of this invention is to provide novel means for holding the service bar aligned with the distributor bar of the second elevator of a Linotype machine, whereby the cleaned matrices on the service bar may be transferred to said distributor bar by sliding the same from the service bar onto the distributor bar.

Other objects of this invention will be apparent from the following description, reference being had to the drawings.

To the above end, generally stated, the invention consists of the novel devices and combinations of devices hereinafter described and defined in the claims.

In the accompanying drawings, which illustrate the invention, like characters indicate like parts throughout the several views.

Referring to the drawings:

Fig. 1 is a plan view of the invention;

Fig. 2 is a view partly in side elevation and partly in section taken substantially on the irregular line 2—2 of Fig. 1;

Fig. 3 is a view partly in end elevation and partly in section taken on the irregular line 3—3 of Fig. 1, on an enlarged scale;

Fig. 4 is a fragmentary view showing a service bar as it would appear when connecting the same to a pair of heads and matrices in a given row in the galley;

Fig. 5 is a fragmentary elevational view showing the heads and matrices assembled on the service bar and lifted thereby from the galley and further showing an aligning bar applied to said heads and matrices;

Fig. 6 is a detail view partly in elevation and partly in section taken on the line 6—6 of Fig. 5;

Fig. 7 is a right-hand end elevation of the parts shown in Fig. 5;

Fig. 8 is a fragmentary elevational view showing the service bar coupled to a distributor bar for the second elevator of a Linotype machine;

Fig. 9 is a detail view principally in section taken on the line 9—9 of Fig. 8;

Fig. 10 is a modification showing one of the heads equipped with a handle; and

Fig. 11 is a right-hand end elevation of the parts shown in Fig. 10.

The numeral 12 indicates a galley in the form of a shallow tray, the bottom member 13 and the two side members 14 thereof being formed of a single sheet of metal. This sheet of metal at the corners, formed by the bottom member 13 and the side members 14, is rolled outwardly to form channel-like reinforcing beads 15. The end members 16 of the galley 12 are cast metal fitted between the side members 14 and rigidly secured thereto. Shims 17, in the form of thin metal plates, are interposed between the bottom member 13 and the end members 16. These shims 17 are held in place by having their end portions secured in the beads 15.

Handles 18, integral with the end members 16, extend outwardly thereof with their upper faces flush with the upper faces of the end members 16. The under sides of the handles 18 are spaced above the bottom of the galley to facilitate the gripping thereof.

Formed in the upper faces of the end members 16 and the handles 18 is a pair of endwise aligned V-seats 19 for removably supporting a service bar 20. In the opposing sides of the end members 16, are, as shown, six pairs of aligned seats 21 for removably holding in each pair thereof a thin metal partition strip 22. A pair of aligned wide seats 23 is formed in the opposing sides of the end members 16 for holding five of the partition strips 22 when not in use.

All of the seats 21 and 23 are long and extend completely through the end members 16 from their upper faces to the shims 17. The spaces between the rear side member 14 and the rearmost pair of seats 21 and between the other pair of said seats are all of the same width. Formed in the end members 16 between the front side member 14 and the seats 19 is a pair of aligned seats 24 like the seats 21 except that they are slightly wider to removably hold a metal aligning bar 25, the longitudinal edges of which are beveled. The partition strips 22, when placed in the seats 21, form long narrow channels 26 in the galley **12** for holding matrices x in upright positions.

In Figs. 8 and 9 are fragmentarily shown the outer end portion of a distributor bar **27** for the second elevator of a Linotype machine. The under side of the distributor bar **27** is V-shaped in cross-section and has in each face thereof longitudinal grooves **28** for the distributor combinations teeth y of the matrices x, whereby said matrices are held suspended from the distributor bar **27** by their teeth y for sliding movement thereon.

The service bar **20** in cross-section is identical with the distributor bar **27** and the grooves therein are designated by the numeral **29**. This service bar **20** is for picking up, carrying and manipulating a row of the matrices x while it is being cleaned. Cleaned matrices x on the service bar **20** may be transferred therefrom to the distributor bar **27**. To hold the service bar **20** aligned with the distributor bar **27** while transferring the matrices x, I provide a coupling **30**. This coupling **30**, as shown, is an inverted channel member having at one of its end portions a pair of pins **31** secured to the sides of the coupling **30** and extending transversely through said coupling. The coupling **30** may be detachably applied to either end portion of the service bar **20** by sliding the same endwise thereon to carry the pins **31** into a deep transverse notch **32** in the respective end of the service bar **20**. To connect the service bar **20** to the distributor bar **27**, the coupling **30** is simply placed in straddled position on said distributor bar, which automatically aligns the grooves **29** in the service bar **20** with the grooves **28** in the distributor bar **27**.

The matrices x are applied to the service bar **20** by moving said bar endwise relative to the matrices x to bring the teeth y of said matrices into the grooves **29**, whereby the matrices x are held suspended from the service bar **20** by their teeth y.

To hold matrices x on the service bar **20** pressed together and to afford convenient means for holding said bar, I mount on each end portion of the service bar **20**, outwardly of the matrices x, a rectangular head **33**. This head **33** has therein a passageway **35** for the service bar **20** and which passageway **35** has the same transverse contour as the service bar **20**.

In each side of each head **33** is a dove-tailed channel **34** in either of which the aligning bar **25** may be inserted by endwise sliding movement to interlock its beveled edges with said groove.

Figs. 10 and 11 show one of the heads **33** equipped with a handle **36** in the form of an inverted channel rigidly secured to said block. This type of handle permits the service bar **20** to slide endwise therethrough.

To prepare the galley **12** to receive matrices x to be cleaned, one of the partition strips **22** is removed from the seats **23** and placed in the rearmost pair of seats **21** to form one of the channels **26**. Next, two of the heads **33** are placed in the channel **26**, one at each end thereof and against the end member **16**. It is important to note that the extreme bottom portions of the passageways **35** are in the same plane as the upper faces of the end members **16** and the handles **18**.

Matrices x to be cleaned are placed in the rearmost channel **26** until it is filled with said matrices between the two heads **33**. This operation is repeated until all of the channels **26** are filled with matrices or at least all of the matrices to be cleaned have been placed in the galley **12**.

To remove one of the rows of matrices x from the galley **12**, the service bar **20** is removed from its seats **19** and one end portion of said bar is placed on one of the handles **18** and end member **16**, which aligns the same vertically with the passageways **35**, and then moved laterally to horizontally align the same with the passageway **35**. Endwise movement of the service bar **20** will carry the same through the respective head **20** and bring the teeth y of the matrices x into the grooves **29** and, finally, said service bar will pass through the passageway **35** in the other head **33** and onto the left-hand side member **16** and handle **18**. This endwise movement of the service bar **20** mounts the heads **33** thereon and connects the matrices x thereto by having their teeth y interlocked with the grooves **29**.

The service bar **20** is next lifted from the galley **12**, which carries with it the heads **33** and the matrices x, and the aligning bar **25** inserted through the dove-tailed channels **34**, on one of the sides of the heads **33**. This aligning bar **25** holds the matrices x against relative movements in the planes thereof. It is important to note, by reference to Fig. 6, that the aligning bar **25** extends edgewise between the upper and lower matrice ears z on the respective side of the matrices x and thereby supports said matrices and relieves the strain on the teeth y that are interlocked with groove **29** in the service bar **20** and hold the matrices x suspended from the service bar **20**.

With the matrices x held by the service bar **20** and the aligning bar **25**, the operator holds the service bar **20** at its end portions and at the same time presses the heads **33** toward each other and thereby holds the matrices pressed tightly together.

The service bar **20** is next carried to a buffing wheel, not shown, and manipulated to subject the matrices x to the buffing action of said wheel to clean the same.

Finally, the aligning bar **25** is removed from the heads **33** and said heads removed from the service bar **20**. The coupling **30** is then applied to one end portion of the service bar **20** and said coupling connected to the distributor bar **27** and the cleaned matrices x transferred to said distributor bar by sliding the same.

The partition strips **22** rest on the shims **17** and are thereby held out of contact with the bottom member **13**, to clear any irregularities therein or any foreign matter thereon. By reference to Fig. 3, it will be noted that the rear side **14** and the partition strip **22** overlap the upper and lower matrix ears z and thereby hold the matrices x against edgewise movement in the channel **26**. Also, the partition strips **22** span the dove-tailed channels **34** and thereby hold the heads **33** against lateral movement in the channels **26**.

One of the principal functions of the aligning bar **25** is to protect the casting faces of the matrices x while buffing the same.

From what has been said, it will be understood that the invention described is capable of modification as to details of construction and arrangement within the scope of the invention herein disclosed.

What I claim is:

1. A galley in the form of a shallow tray having therein a channel for holding upright matrices having in their upper ends V-shaped notches with

combination teeth on the sides thereof, a removable head member in each end of the channel and having a passageway, the lower portion of which is in the form of a V aligned with the V notches in the matrices, and a long single hand-manipulated service bar, the under side of which is V-shaped in cross-section and having in the sides thereof longitudinal grooves, said service bar at either end being insertable into either one of the head members which aligns the grooves in the service bar with the combination teeth in the matrices.

2. A galley in the form of a shallow tray having end members provided with aligned pairs of seats, and removable partitions mounted in the seats and dividing the tray into a plurality of channels for holding matrices provided with distributor combinations teeth in upright positions with the teeth of the matrices in each channel aligned, in combination with a service bar having longitudinal grooves for the distributor combinations teeth, and a pair of heads having passageways for the service bar, said heads adapted to be placed in one of the channels with their passageways aligned and the matrices therebetween, with one of the passageways, when one end portion of the service bar is inserted therein, aligning the grooves in said bar with the distributor combinations teeth.

3. A long single hand-manipulated service bar, the under side of which is V-shaped in cross-section and having in the sides of the V longitudinal grooves constructed and arranged to enter the combinations teeth in the sides of V-shaped notches in the upper end of upright matrices by endwise movement of the bar and hold the matrices suspended from the service bar, and hand held means slidable on each end portion of the service bar for holding the matrices suspended from the service bar pressed together, said service bar having in one end a deep transverse notch, a channel member capping one end portion of the service bar and extending outwardly therefrom for capping a like bar for supporting the respective end of the service bar therefrom with its longitudinal grooves aligned with the longitudinal grooves in said like bar, said channel member having therein a pair of transverse pins arranged to enter the notch in the service bar by relative endwise movements of the service bar and the channel member to detachably attach the channel member to the service bar.

4. The structure defined in claim 3 in which the heads have on each side of the service bar a pair of aligned dove-tailed channels and further including a wide flat bar shiftable from one side of the service bar to the other and slidably mounted in the respective pair of aligned channels for edgewise supporting the matrices when lifted from the supporting means by the heads and the service bar and turned into a horizontal position.

5. A long single hand-manipulated service bar, the under side of which is V-shaped in cross-section and having in the sides of the V longitudinal grooves constructed and arranged to enter the combinations teeth in the sides of V-shaped notches in the upper end of upright matrices by endwise movement of the bar and hold the matrices suspended from the service bar, and hand held means slidable on each end portion of the service bar for holding the matrices suspended from the service bar pressed together, each hand held means being a head member having therein a passageway through which the service bar may be moved endwise with a working fit, said structure further including an outwardly projecting handle on each head member in the form of an inverted channel loosely capping the service bar, said head members having on each side of the service bar aligned dove-tailed channels, and a flat bar slidably mounted in the aligned channels on either side of the service bar for transversely aligning matrices suspended from the service bar.

6. The combination with means supporting a row of upright matrices having in their upper end portions aligned V-shaped notches provided in their sides with distributor combinations teeth, of a pair of loose heads on the supporting means with the matrices therebetween, said heads each having a passageway, the lower portion of which is V-shaped and aligned with the V-shaped notches in the matrices, and a service bar, the under side of which is V-shaped in cross-section and having in the sides of the V longitudinal grooves constructed and arranged to enter the distributor combinations teeth on the matrices by sliding the service bar endwise through the heads and the notches in the matrices and attaching the matrices to the service bar, whereby the service bar and attached matrices may be lifted from the supporting means by the two heads.

7. The structure defined in claim 6, further including means for coupling the service bar to a like bar in endwise abutting arrangement with their longitudinal grooves aligned.

8. The structure defined in claim 6, further including means for coupling the service bar to a like bar in endwise abutting engagement with their longitudinal grooves aligned, said coupling means including an inverted channel member capping one of the heads and extending endwise outwardly thereof for capping the other bar, said channel member being fixed to one of the bars, and means for separably interlocking the channel member with the other bar.

9. The structure defined in claim 6, further including a handle for each head, the handles being inverted channel members capping the head at one of their end portions, fixed thereto and extending outwardly thereof.

10. The structure defined in claim 6, further including a bar having sliding interlocking engagement with the heads on one of their sides for edgewise supporting the matrices when lifted from the supporting means by the heads and the service bar and turned into a horizontal position.

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